



Office of Clinical and Preventive Services  
Division of Clinical and Community Services



2019

**NATIONAL  
&  
COMMUNITY-BASED  
SERVICES**

CONFERENCE

# Using data to plan prevention/ interventions

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National Pharmacy and Therapeutics Committee



# Objectives

- Data can be a powerful resource to help you predict or identify patients in need of healthcare-related assistance.
- Objectives:
  1. Demonstrate how adverse reaction reporting can help protect other patients who may be at similar risk.
  2. Identify additional types of data that can be used to promote health and safety.
  3. Identify, share, and discuss ideas or examples of ways in which you have used data to improve the lives of our patients.

Why do we need data?

# Measures, tools, and reports



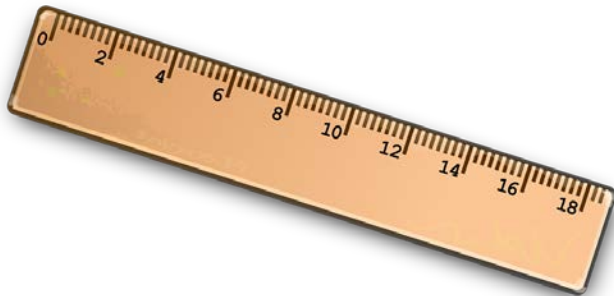
# GPRA

## Government Performance and Results **Act**



# GPRA

## Measure



Immunizations:  
Influenza 6mo – 17yr

## Tool



Clinical Reporting  
System (CRS)

## Report



GPRA Report to  
Congress

# Definitions: Measures

- Measures

- What we want to look at
  - Shows if things are working the way you think they are
  - Shows if an intervention makes things better (or worse)

Measures

**Numerator**



**Denominator**



# Measures: Denominator

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## Denominator



People who came to diabetes clinic this year

People with diabetes and high blood pressure

*People who live in the community*

Measures: Numerator

**Numerator**

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**Denominator**



*People with A1C < 8*

People who were received nutrition education

*People with a dental visit*



# Measures: Exceptions



**Numerator**

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**Denominator**



**Exclusions**



People who are <18 years

People who also have  
hypertension

People who live outside the  
community

Reports are only as good as the data you enter



Types of data

# Health factors

The screenshot displays a software interface for managing health factors. The main window, titled "Health Factors", contains a table with the following data:

Visit Date	Health Factor	Category	Comment
11/16/2015	Previous (former) Smokeless	Tobacco	
09/16/2015	Current Smoker, Some Dau	Tobacco	
09/24/2015			

An "Add Health Factor" dialog box is open in the foreground, showing a list of items to be added:

- DIABETES SELF MONITORING
- ECOG PERFORMANCE STATUS
- ELECTRONIC NICOTINE DELIV SYSTEM (ENDS)
- HCV STATUS
- LEARNING PREFERENCE
- NIDA QUICK SCREEN
- OCCUPATION
- REPRODUCTIVE PLAN
- TB STATUS
- TOBACCO (EXPOSURE)
- TOBACCO (SMOKELESS - CHEWING/DIP)
- TOBACCO (SMOKING)
- TRAVEL HISTORY

The dialog box also includes "Add" and "Cancel" buttons and a "Comment" text field at the bottom.

# Health factors

**Add Health Factor**

Items

- + OCCUPATION
- + REPRODUCTIVE PLAN
- + TB STATUS
- + TOBACCO (EXPOSURE)
- + TOBACCO (SMOKELESS - CHEWING/DIP)
- TOBACCO (SMOKING)
  - CEREMONIAL USE ONLY
  - CESSATION-SMOKER
  - CURRENT SMOKER, EVERY DAY**
  - CURRENT SMOKER, SOME DAY
  - CURRENT SMOKER, STATUS UNKNOWN
  - HEAVY TOBACCO SMOKER
  - LIGHT TOBACCO SMOKER
  - NEVER SMOKED

Comment: smokes 1 pack per day

Add

Cancel

**Add Health Factor**

Items

- + ACTIVITY LEVEL
- + ALCOHOL/DRUG
- + ASTHMA TRIGGERS
- + BARRIERS TO LEARNING
- + CONFIDENCE IN MANAGING HEALTH PROBLEMS
- + DIABETES SELF MONITORING
- + ECOG PERFORMANCE STATUS
- ELECTRONIC NICOTINE DELIV SYSTEM (ENDS)
  - CESSATION ENDS USER
  - CURRENT ENDS USER**
  - NEVER USED ENDS USER
  - PREVIOUS ENDS USER
- + HCV STATUS
- LEARNING PREFERENCE

Comment:

Add

Cancel

# Exam Codes

The image shows a screenshot of a medical software interface. The main window is titled "Assessments" and contains a sub-window "Exams" with a list of exam codes and descriptions. A dialog box titled "Document an Exam" is open, showing the process of documenting a specific exam.

**Exams List:**

Code	Exams
35	ALCOHOL SCREENING
44	ASQ - SUICIDE SCREENING
31	AUDITORY EVOKED POTENTIAL
99	BIMS
41	COLOR BLINDNESS
30	DENTAL EXAM
36	DEPRESSION SCREENING
03	DIABETIC EYE EXAM
28	DIABETIC FOOT EXAM, COMPLETE
33	EYE EXAM - GENERAL
37	FALL RISK
32	FOOT EXAM - GENERAL
29	FOOT INSPECTION
34	INTIMATE PARTNER VIOLENCE
39	NEWBORN HEARING SCREEN (LEFT)
38	NEWBORN HEARING SCREEN (RIGHT)
43	SUICIDE RISK ASSESSMENT
42	VTE RISK ASSESSMENT

**Document an Exam Dialog:**

Visit: 07/09/2

Exam: DEPRESSION SCREENING

Result: NORMAL/NEGATIVE

Comment: [Empty text box]

Provider: LAMER,CHRIS

Buttons: Add, Edit, Delete, Select, Cancel

Radio buttons:  Current,  Historical,  Not Done



# Vital Signs & Measurements

Default Units	02-Jul-2019 13:04	Range	Units
Temperature			F
Pulse		60 - 100	/min
Respirations			/min
O2 Saturation			%
Blood Pressure	135/85	90 - 150	mmHg
<input checked="" type="radio"/> Cardiac Ejection Fraction			
Height	58		in
Weight	215		lb
Pain			
Peak Flow			
Best Peak Flow			
Vision Corrected			
Vision Uncorrected			

New Date/Time    Update    Reset

# Patient Education

**Education Topic Selection** [X]

3745 items

Select By  Category List  Disease & Topic Entry  Pick List  
 Name Lookup  Procedure & Topic Entry

Items

- DIABETES MELLITUS
  - ANATOMY & PHYSIOLOGY
  - BEHAVIORAL AND EMOTIONAL HEALTH
  - COMPLICATIONS
  - CULTURAL/SPIRITUAL ASPECTS OF HEALTH
  - DISEASE PROCESS
  - EQUIPMENT
  - EXERCISE
  - FOLLOW-UP
  - FOOT CARE AND EXAMINATIONS
  - HELP LINE
  - KIDNEY DISEASE
  - LIFESTYLE ADAPTATIONS
  - LITERATURE
  - MEDICAL NUTRITION THERAPY
  - MEDICATIONS
  - NUTRITION**
  - PAIN MANAGEMENT
  - PERIODONTAL DISEASE
  - PRE-CONCEPTION CARE

Select Cancel

Display Outcome & Standard

**Add Patient Education Event** [X]

Education Topic Diabetes Mellitus-Exercise (Diabetes Mellitus)

Type of Training  Individual  Group

Comprehension Level GOOD

Length 5 (min)

Comment Talked about joining the gym for low impact aerobics 3 times a week and how that could improve health

Provided By LAMER, CHRIS

Readiness to Learn EAGER TO LEARN

Status/Outcome  Goal Set  Goal Met  Goal Not Met

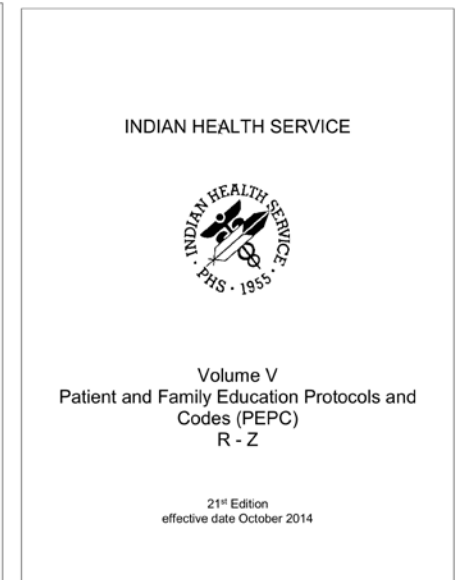
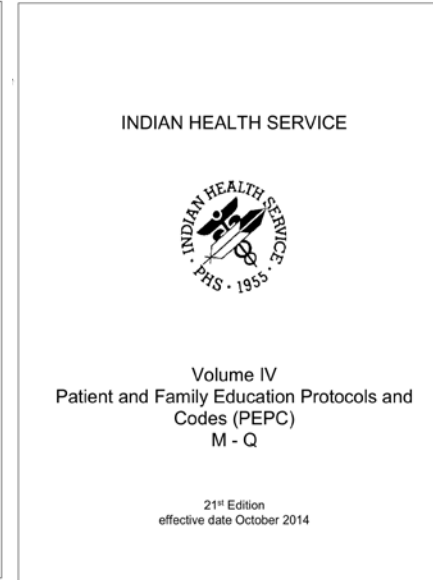
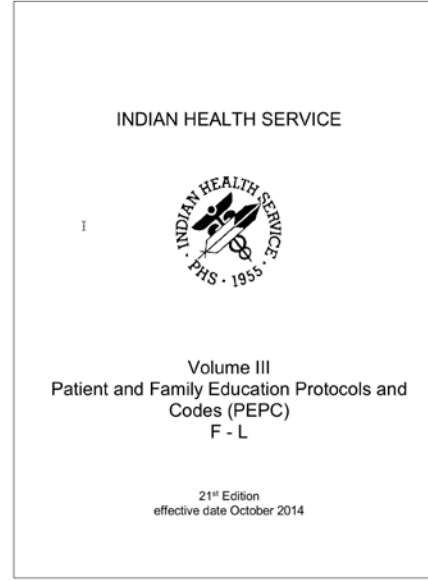
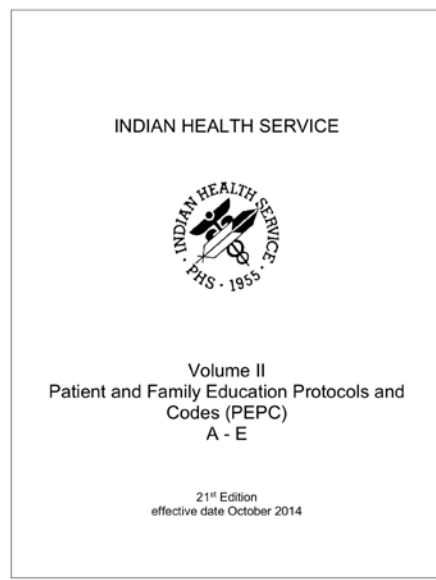
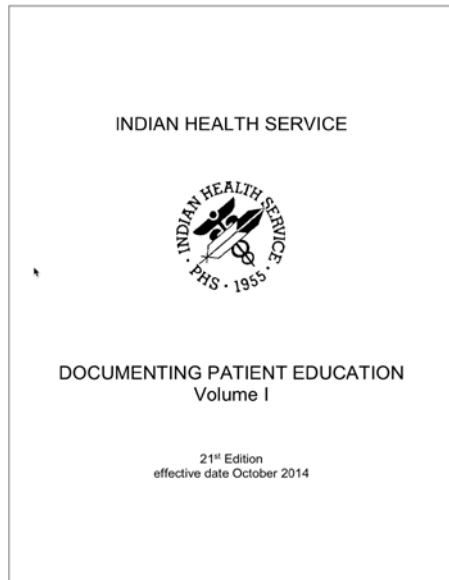
Add Cancel

Historical

Display Outcome & Standard

Patient's Learning Health Factors

# Patient education



# Integrated problem list

NOTIFICATIONS COVER SHEET TRIAGE **PROBLEMS** PRENATAL WELL CHILD WELLNESS MEDS LABS ORDERS CONSULTS NOTES

Problem List Family History Surgical Hx Patient Goals AMI Anticoagulation Asthma Eyeglass Stroke

**Integrated Problem List** Expand All  Chronic  Episodic  Sub-acute  Social/Env  Inactive  Current/Most recent I Ed i Get SCT Pick List POV Add Edit Delete

Status	Onset Date	Provider Narrative	Comments	PHx	PIP	IP	ICD
Chronic	08/02/2004	*PTSD					309.81
Chronic		*ALLG RHINITIS					477.9
Chronic		*L NASAL POLP					471.9

POV

ID	Status	Prov. Narrativ	POV	Episodicity	Prov. Text	Goal Notes	Care Plans	Visit Instructions	Pt Ed	Tx/Regimen/Regimen	Tx/Regimen/FU display only
1377	Episodic	Viral pharyngitis	<input checked="" type="checkbox"/>	<input type="radio"/> First episode <input type="radio"/> New episode <input type="radio"/> Old episode <input type="radio"/> Ongoing episode <input type="radio"/> Undefined episodicity					<input type="checkbox"/> DP <input type="checkbox"/> MED <input type="checkbox"/> EX <input type="checkbox"/> N <input type="checkbox"/> LA <input type="checkbox"/> P	Treatment/Regimen	
1377	Episodic	Common cold	<input checked="" type="checkbox"/>	<input type="radio"/> First episode <input type="radio"/> New episode <input type="radio"/> Old episode <input type="radio"/> Ongoing episode <input type="radio"/> Undefined episodicity					<input type="checkbox"/> DP <input type="checkbox"/> MED <input type="checkbox"/> EX <input type="checkbox"/> N <input type="checkbox"/> LA <input type="checkbox"/> P	Treatment/Regimen	
6936	Chronic	Posttraumatic stress disorder	<input checked="" type="checkbox"/>	<input type="radio"/> First episode <input type="radio"/> New episode <input type="radio"/> Old episode <input type="radio"/> Ongoing episode <input type="radio"/> Undefined episodicity					<input type="checkbox"/> DP <input type="checkbox"/> MED <input type="checkbox"/> EX <input type="checkbox"/> N <input type="checkbox"/> LA <input type="checkbox"/> P	Treatment/Regimen	

Primary POV

Viral pharyngitis

Save Cancel

# Education Component using the Problem List

**Education Topic Selection** 3745 items

Select By  Category List  Disease & Topic Entry  Pick List  
 Name Lookup  Procedure & Topic Entry

**Enter both the Disease/Condition/Illness and the Topic for the Education activity.**

Disease/Condition/Illness Selection

Disease/Illness Diabetes mellitus type 2

POV  
Asthma | really really bad asthma  
**Diabetes mellitus type 2 |**  
Herpes simplex |  
Intrinsic asthma without status asthmaticus | asthma

Topic Selection

ANATOMY AND PHYSIOLOGY  
COMPLICATIONS  
DISEASE PROCESS  
EQUIPMENT  
EXERCISE  
FOLLOW UP  
HOME MANAGEMENT  
HYGIENE  
LIFESTYLE ADAPTATION  
LITERATURE  
**MEDICATIONS**  
NUTRITION

OK  
Cancel

# Updating the topics

- Updated general subtopics
- Identified SNOMED codes that are associated with subtopics so other EHR systems can map to our education code process.
- Removed outcomes and standards and made code descriptions more simplistic.

## • EX – EXERCISE

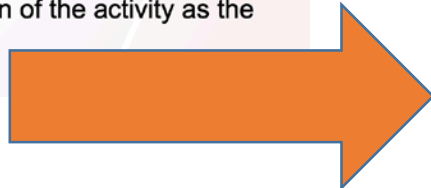
- OUTCOME: The patient/family will understand the role of physical activity in the patient's disease process or condition.
- STANDARDS:
  1. Discuss the medical clearance issues for physical activity.
  2. Discuss the benefits of any exercise, such as improvement in well-being, stress reduction, sleep, bowel regulation, and self-image.
  3. Discuss the obstacles to a personal physical activity plan and the solutions to those obstacles. Assist the patient in developing a personal physical activity plan.
  4. Encourage the patient to increase the intensity and duration of the activity as the patient becomes more fit, as appropriate.
  5. Refer to community resources as appropriate.

## EX – EXERCISE (304507003)

Use this code to document education about the about the role of physical activity in the patient's disease process or condition to the patient/care giver.

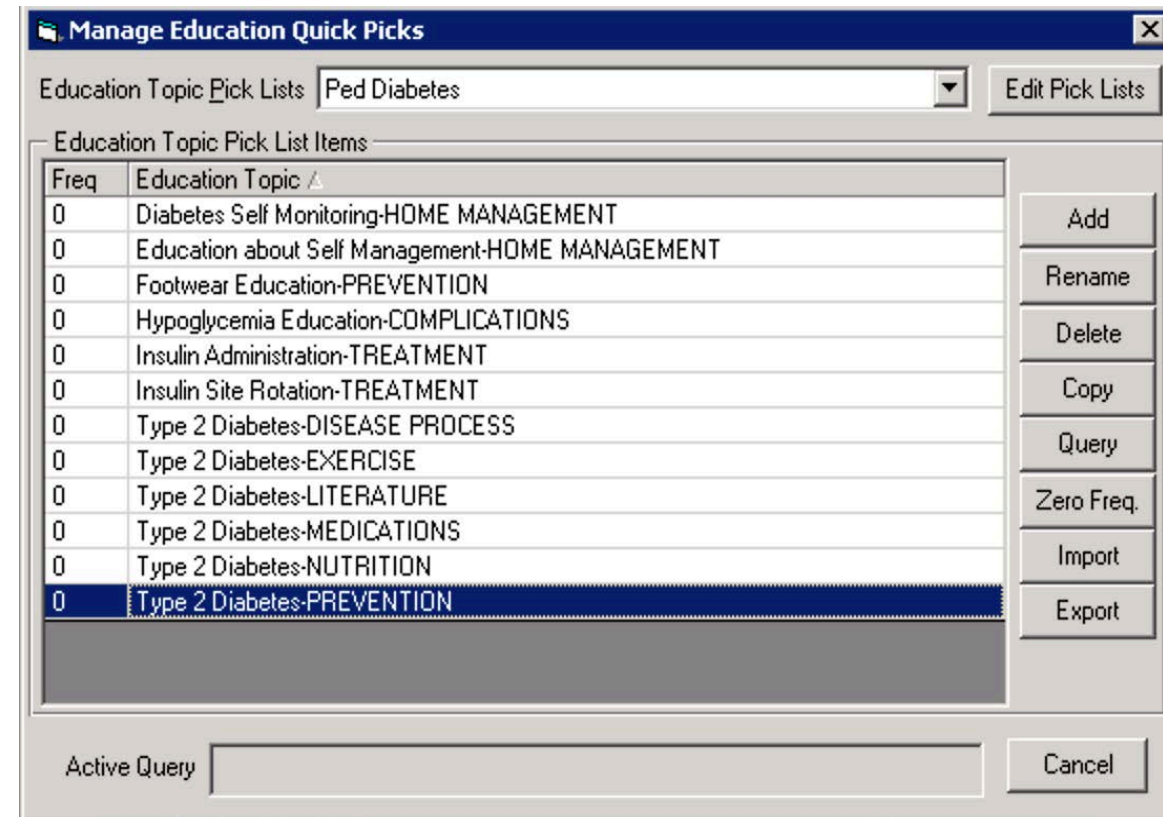
Education can include information such as:

- Benefits of physical activity.
- Developing a physical activity plan.
- Community resources.
- Medical clearance for physical activity as appropriate.



# pick lists

- Pick-lists can be created and shared nationally.
- Pick-lists can contain:
  - Specific SNOMED education codes
  - Generic education codes



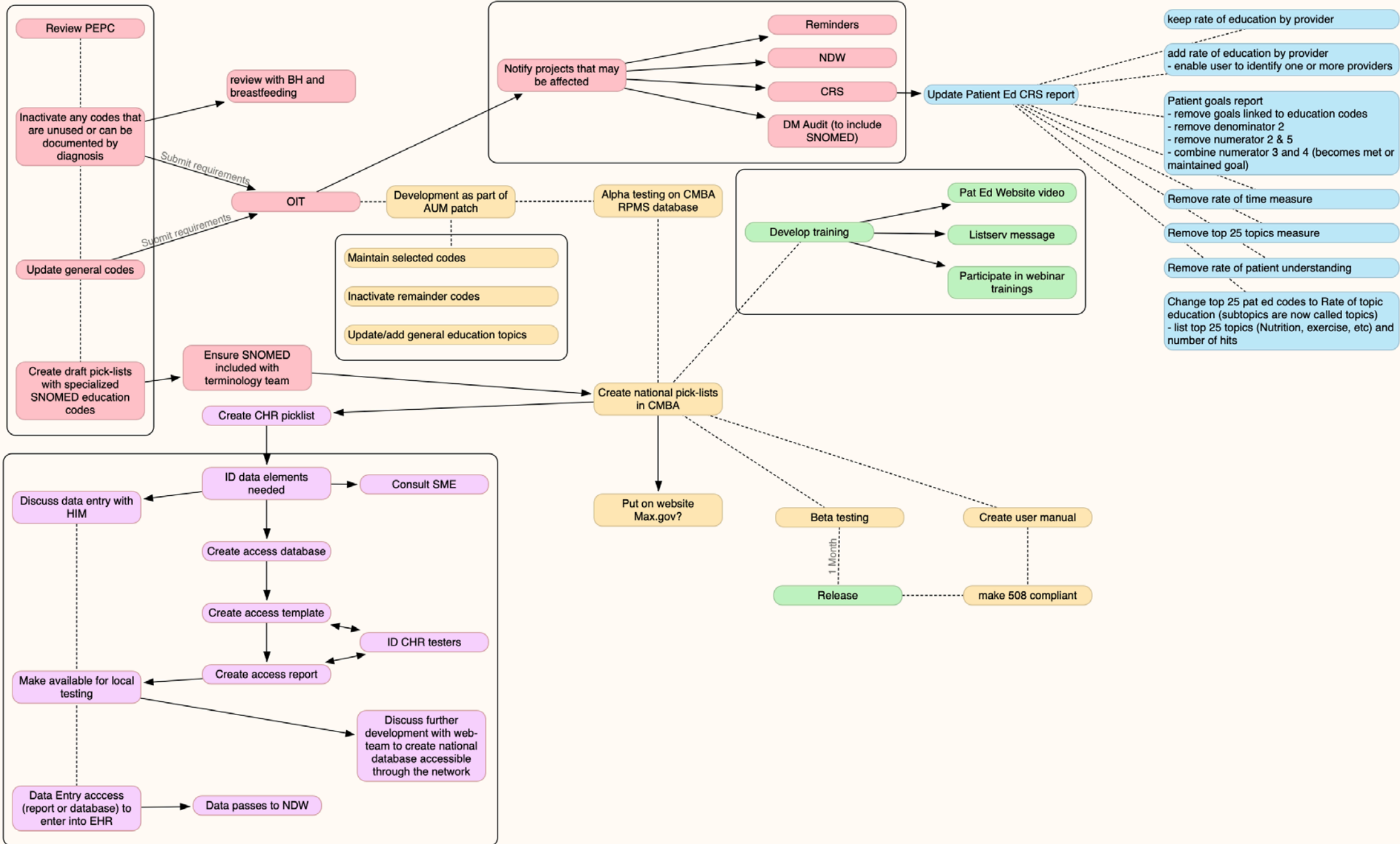
JULY

JANUARY 2020

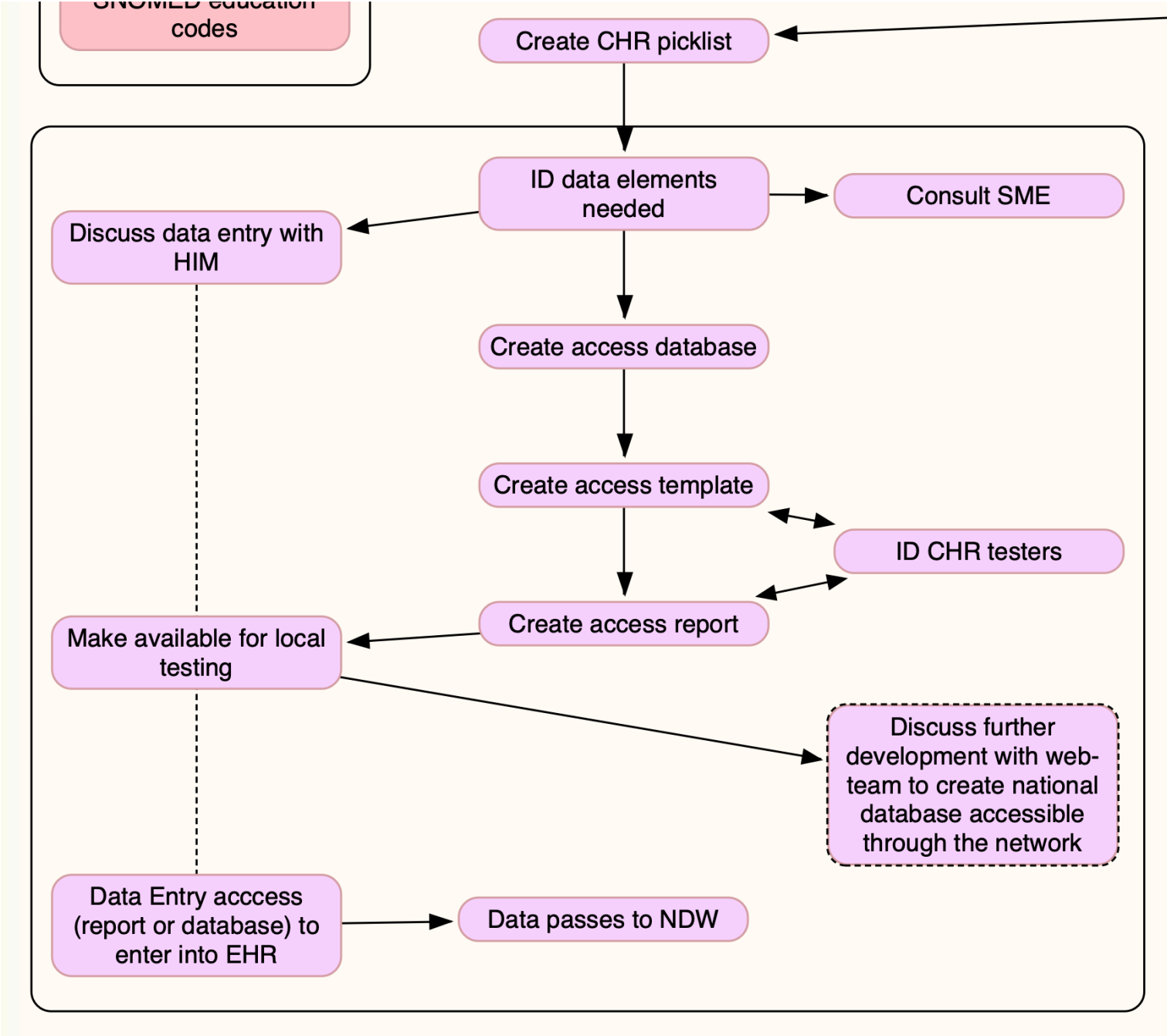
FEBRUARY 2020

SPRING 2020

SOMETIME



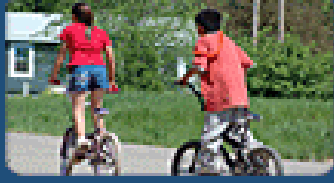




# Definitions: Tools

- What we use to calculate measures





# RPMs

**PATIENT CHART**

**Demo Patient** 22 Mar 1947 (51) F GENERAL 12 Mar 2008 08:49 GREEN TEAM

**Chief Complaint**  
Author: LAMER, CHRISTOPHER | Chief Complaint: 1 Patient complains of Fever, Moderate Pain for 5 Days

**Health Factors**

Visit Date	Health Factor	Category	Comment
03/12/2009	Current Smoker	Tobacco	
01/04/2008	Current Smoker	Tobacco	
08/17/2005	Current Smoker	Tobacco	1ppd
06/25/2005	Current Smoker	Tobacco	Plus per day
09/16/2004	Current Smoker	Tobacco	

**Vital Signs**

Vital	Value
RS	16 /min
BP	122/76 mmHg
PR	95 /min
HT	65 in (165.1 cm)
WT	152 lb (68.9 kg)
BMI	31.95
PA	4
PF	356
TMP	98.5 F (36.34 C)
O2	96.5
VC	24 in (30.96 cm)
HC	12 in (30.48 cm)
VC	20/15
HC	12 in (30.48 cm)
PR	VERT:dc
PH	36 cm (14.17 in)
VU	200/400

**IHS iCare - Demo panel - Panel View**

File Patients Tools Window Help

**Demo panel** Total Patients = 4  
Last updated Oct 18, 2006 04:54 PM by (Unknown)

Information current as of: Oct 12, 2006

Clinical Group	Measure Name	# Patients in Denominator	# Patients in Numerator	% Met	2006 Goal	IHS National 2005 Performance
DIABETES GROUP	LDL Assessed	0	0	0%	50.0%	53.0%
	Nephropathy Assessed	0	0	0%	50.0%	47.0%
	Retinopathy Exam	0	0	0%	8 BASEL...	90.0%
	Depression Assessed	0	0	0%	N/A	N/A
	Influenza Vaccine	0	0	0%	N/A	N/A
	Pneumovax Vaccine Ever	0	0	0%	N/A	N/A
DENTAL GROUP	Dental Access General	4	0	0%	Maintain	24.0%
	Sealants	0	0	0%	Maintain	249,882
	Topical Fluoride	0	0	0%	N/A	113,324
IMMUNIZATIONS	# Patients	0	0	0%	Maintain	85,318
	Influenza 65+	0	0	0%	Maintain	59.0%

**Indian Health Service Personal Health Record**

What is the Personal Health Record?  
The Indian Health Service Personal Health Record (PHR) can help you access your health information. You can track medications and lab results, contact your health care provider, and much more - all from the privacy of your personal computer and mobile device.

Who can use the Personal Health Record?  
Any patient within the Indian Health System can register to use the PHR. As part of the registration process, patients must verify their identity at an Indian Health Service, tribal, or urban health care facility.

What should I use the Personal Health Record for?  
The PHR is a tool that provides you with timely access to your health information. It is not a substitute for meeting with your health provider. If you are experiencing a medical emergency, call 911 or go immediately to the closest emergency room.

**PHR Maintenance**  
The PHR is updated on Thursdays between 10:00 am and 11:00 am Eastern Time (9:00-10:00 CT, 8:00-9:00 MT, 7:00-8:00 PT). You may not be able to log into your PHR during this time. We apologize for any problem this may cause. Thank you for your patience. If you have questions, please contact your healthcare facility.

**PHR Login**

Username: christina  
Password: \*\*\*\*\*

Register to Use PHR

May 03, 2006 Page 1

\*\*\* IHS 2006 National GPRA Clinical Performance Measure Report \*\*\*

DEMO HOSPITAL

Report Period: Jul 01, 2005 to Jun 30, 2006  
Previous Year Period: Jul 01, 2004 to Jun 30, 2005  
Baseline Period: Jul 01, 1999 to Jun 30, 2000

**CLINICAL PERFORMANCE SUMMARY**

	Site	Site	Site	GPRA06	Mat '1	2010
	Current	Previous	Baseline	Goal	2005	Goal
<b>DIABETES</b>						
*Diabetes DX Ever	10.1%	9.6%	8.5%	N/A	11.0%	N/A
*Documented A1c	83.2%	73.2%	84.2%	N/A	78.0%	50.0%
*Poor Glycemic Control >9.5	23.9%	14.8%	25.4%	Maintain	15.0%	TBD
*Ideal Glycemic Control <7	27.7%	12.8%	23.7%	32.0%	30.0%	40.0%
*BP Assessed	98.1%	91.3%	91.9%	N/A	89.0%	N/A
*Controlled BP <130/80	37.4%	32.9%	35.1%	Maintain	37.0%	50.0%
*LDL assessed	39.4%	0.7%	10.5%	56.0%	53.0%	70.0%
*Nephropathy Assessed	58.1%	14.1%	0.9%	50.0%	47.0%	70.0%
*Retinopathy Exam	57.4%	61.7%	53.5%	8 BASELINE	850.0%	70.0%
				# Maintain	#50.0%	70.0%
*Depression Assessed	3.9%	4.0%	3.5%	N/A	N/A	N/A
*Influenza Vaccine	76.1%	65.8%	65.8%	N/A	N/A	N/A
*Pneumovax Vaccine Ever	86.5%	84.6%	87.7%	N/A	N/A	N/A
<b>DENTAL</b>						
Dental Access General	16.9%	19.6%	20.1%	Maintain	24.0%	40.0%
Sealants	145	469	420	Maintain	249,882	TBD
Topical Fluoride						
*# Applications	158	157	64	N/A	113,324	N/A
*# Patients	120	135	61	Maintain	85,318	TBD
<b>IMMUNIZATIONS</b>						
Influenza 65+	77.4%	67.5%	68.4%	Maintain	59.0%	90.0%

# PHARMACOVIGILANCE

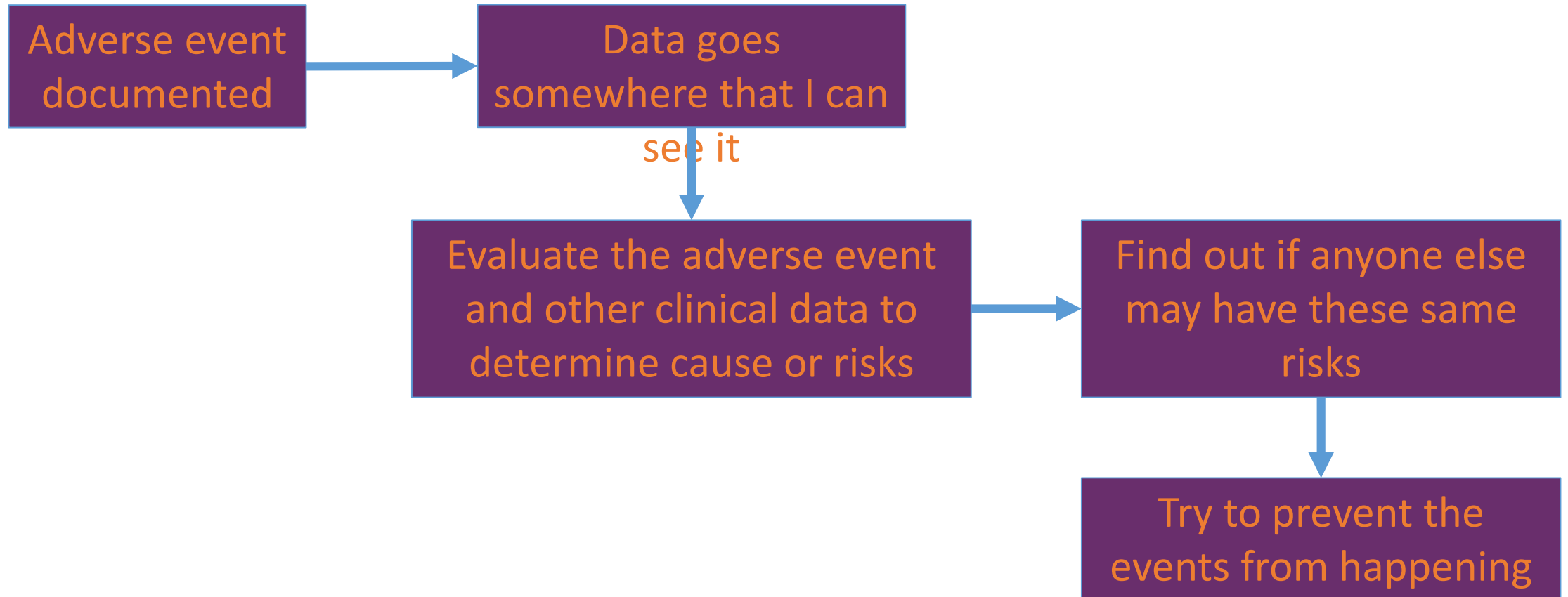


- **World Health Organization (WHO) definition:** the science and activities relating to the detection, assessment, understanding, and prevention of adverse effects or any other drug-related problem.

# What do I want to achieve?

- I want to know what adverse events are occurring
- I want to know if there are reasons they are happening
- I want to know if there is something to prevent them

# How would I do this?



# What do I know NOW?

## What data do I have now?

**Adverse Reactions**

Agent	Type	Reaction	Status	InAct D...
CHITOSAN	Drug	NAUSEA,VOMIT...	Verified	
FD&C BLUE DYE #2	Drug	ANXIETY	Verified	

**Create Adverse Reaction**

Reaction:  Observed

Causative agent: LISINAPRIL

Nature of Reaction: Drug

Event Code: DRUG INTOLERANCE

Source of Information: PATIENT

Observer: Lamer, Chris

Reaction Date/Time: May 2019

Severity: [ ]

Signs/Symptoms:

Available: COUGH, COUGHING <COUGH>, CPK INCREASED <INCREASED>, CRAMP, CREATINE KINASE INCREASED, CREATININE SERUM INCREASED, CUTANEOUS ERUPTION <R>, CUTANEOUS HYPERSENSITIVITY, CVA <STROKE>, CYANOSIS

Selected: COUGH May 2019 PATIENT

Imprecise Date

Date/Time: May 2019

Source: PATIENT

Comments: patient developed dry "barking" cough two months after starting lisinopril 10mg

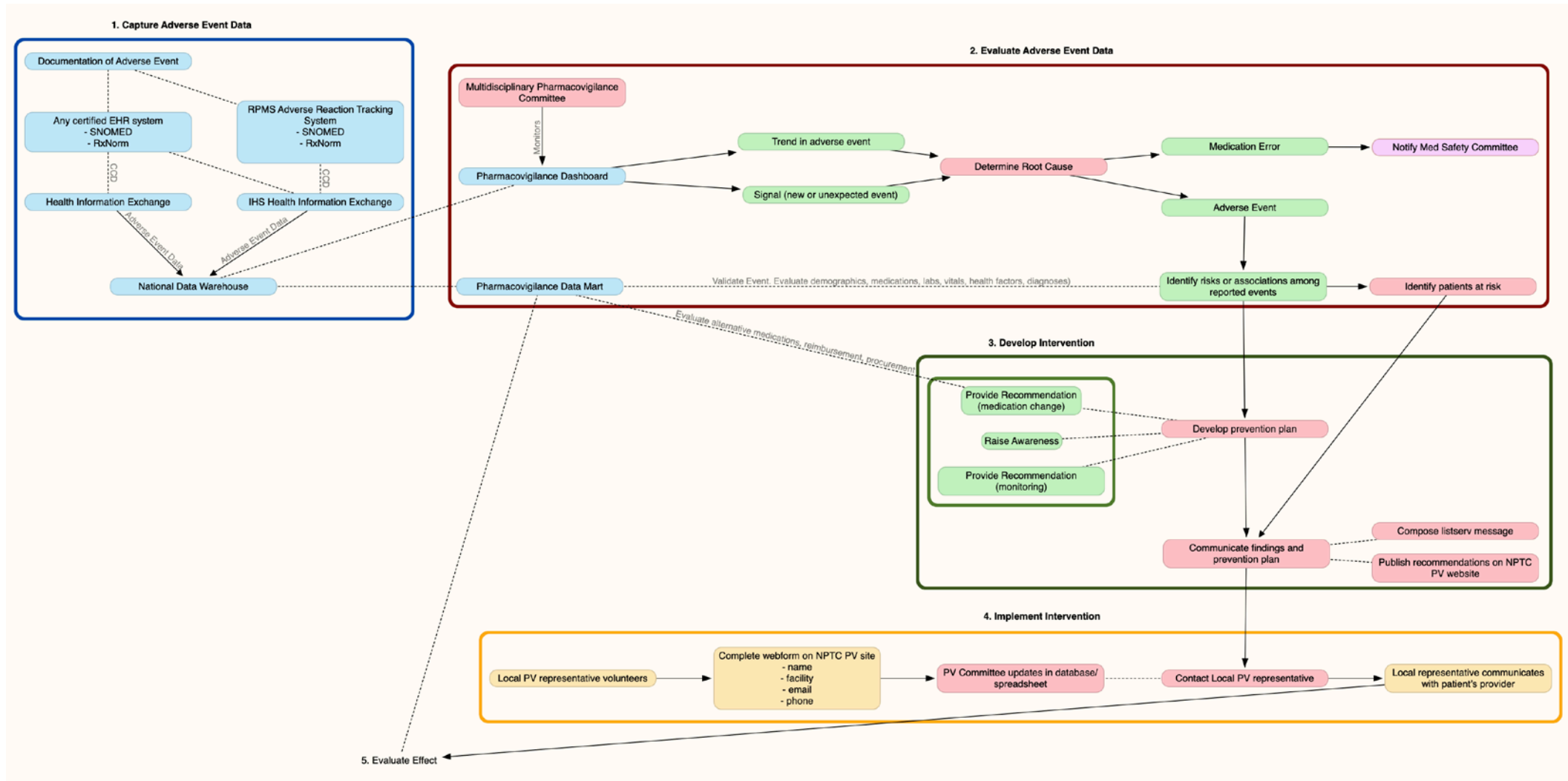
Buttons: Current, OK, Cancel

- Where is it? Electronic Health Records
- Who enters it? Clinicians
- Are there limitations?
  - Causes a justification – many not use for mild or moderate events
- Where does it go? Health Information Exchange

How do I get the data?







# What kinds of information do you want to know about?

- What questions are you trying to answer?
- What are your goals in answering the question?
  - SMART (specific, measurable, achievable, relevant, and time-based)
- What data do you need?
  - Where will it come from?
  - How will you get it?
- Are there any barriers?

Thank you